



Fact Sheet

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The Clean Energy and Environmental Accomplishments of Senate Democrats in the 110th and 111th Congresses

As the 40th Anniversary of Earth Day approaches, many people will reflect on the significant steps the nation has taken to improve the environment and protect our natural resources. While real progress has been made since the first Earth Day in 1970, work continues to help provide current and future generations with cleaner air, cleaner water, reductions in pollution, the elimination of hazardous waste sites, and stronger natural resource protections.

Senate Democrats have been honoring those efforts since regaining the majority in 2006 by aggressively promoting a legislative agenda that includes strong clean energy, environmental, and natural resource protection provisions. This Fact Sheet details the many legislative clean energy and environmental accomplishments Senate Democrats have achieved during the 110th and 111th Congresses.

111th Congress

American Recovery and Reinvestment Act

The *American Recovery and Reinvestment Act* (Recovery Act) enacted a number of important energy and environmental provisions aimed at creating jobs while simultaneously improving the environment. The most significant of these provisions is the historic investment in clean energy. The law provided \$66.8 billion (as calculated by the Congressional Research Service) through a combination of tax incentives, federal funding, and loan guarantees providing for a significant expansion of clean energy deployment, job creation, and a better environment.

While the recession and tight credit markets had threatened to derail clean energy growth, the *American Recovery and Reinvestment Act* is accelerating – and is projected to continue to advance – the development of clean energy technologies. These positive

impacts were recently detailed in reports on the growth of certain renewable energy industries in 2009.

Wind. In 2009, the United States broke all previous records by installing over 10,000 megawatts (MW) of new wind energy. This one year growth in wind energy generation increased the nation's total wind energy generating capacity by 40 percent (25,000 MW to 35,000 MW) [\[AWEA; Last Accessed 4.16.10\]](#).

Solar. In 2009, the nation's total solar energy electrical capacity surpassed 2,100 MW and total thermal capacity reached nearly 24,000 megawatts-thermal. The 481 MW increase in the nation's solar electricity generation represents a 37 percent increase from 2008 levels [\[SEIA; Last Accessed 4.16.10\]](#) and [\[SEIA; Last Accessed 4.16.10\]](#).

Geothermal. In 2009, the United States had a total installed geothermal capacity of close to 3,100 MW, an increase of 176 MW from 2008. The 176 MW of geothermal energy installed in 2009 surpassed the combined total of newly installed geothermal from the previous three years (2006, 2007, and 2008). Even more promising, another 161 MW of geothermal were in the final stages of development before coming online and more than 7,000 MW are in earlier phases of development [\[GEA; Last Accessed 4.16.10\]](#).

Going forward, the *American Recovery and Reinvestment Act* is projected to continue to spur growth in clean energy deployment. According to a recent Energy Information Administration (EIA) Annual Energy Outlook, the nation is expected to deploy 10,000 more megawatts of electricity from renewable energy resources in 2010 than it would have had the legislation not been passed. Further, the Outlook anticipates that, by 2020, the United States will generate 37,000 more megawatts of electricity from renewable energy resources than it would have had the *American Recovery and Reinvestment Act* not been enacted [\[EIA; Last Accessed 4.16.10\]](#).

In terms of job creation, many of the nation's renewable energy industries have also been experiencing strong growth. These trends were recently detailed in reports on the growth of certain renewable energy industries in 2009.

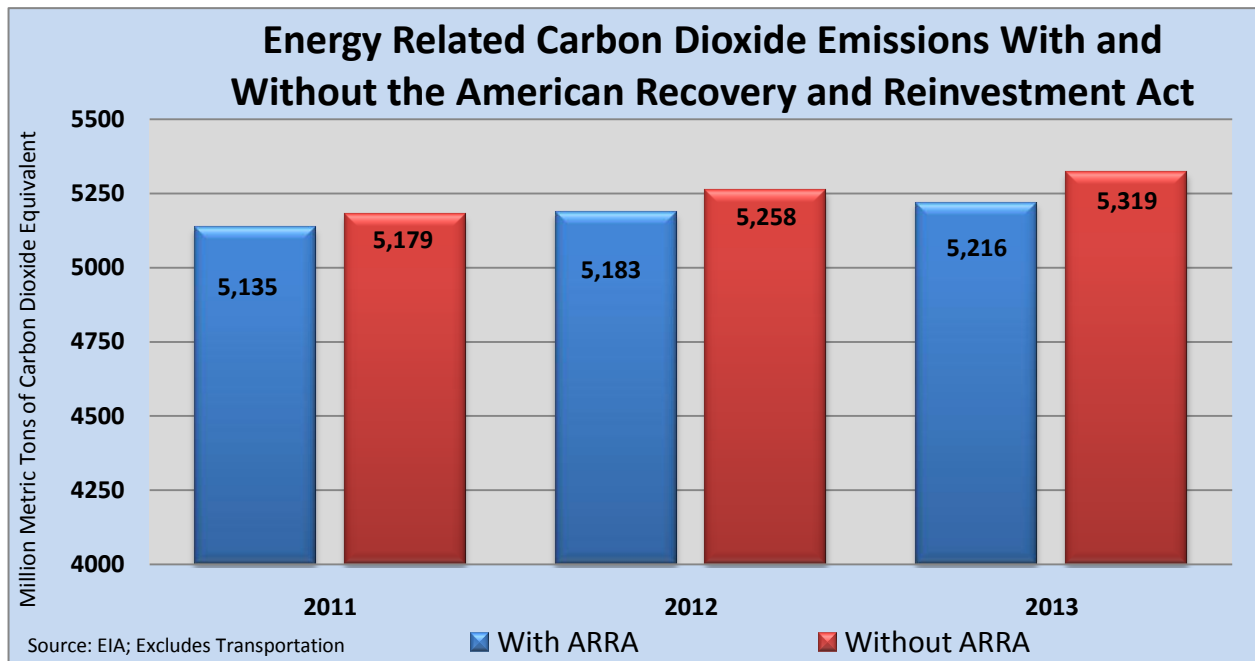
Wind. In 2009, the number of people employed in the wind energy industry reached 85,000, which is an increase from 50,000 two years ago. The number of wind manufacturing facilities also increased by 39 and the United States now has over 200 facilities located across the United States.

Solar. In 2009, the number of people directly employed by the solar industry rose to approximately 25,000, an increase of approximately 25 percent from 2008 levels. Additionally, the Solar Energy Industries Association most recent Annual Report found that in 2009 alone "its employees supported an additional 7,000 induced jobs for a total economic impact of 17,000 new jobs in 2009." Going forward, because growth in the solar industry is expected to continue with

the total number of jobs in the solar industry or supported by its supply chain reaching 60,000 by 2010 [\[SEIA; Last Accessed 4.15.10\]](#).

Geothermal. The Geothermal Energy Association estimates that the 7,000 MW of geothermal energy under development will create 29,750 permanent jobs [\[GEA; Last Accessed 4.15.10\]](#).

In terms of the environment, the EIA has projected that the *American Recovery and Reinvestment Act* will avert the energy-related emission of approximately 225 million metric tons of carbon dioxide equivalent between 2011 and 2013.



Omnibus Public Land Management Act

The *Omnibus Public Land Management Act of 2009* represents the most significant piece of natural resource legislation passed by Congress in 15 years. The law designated over two million acres of wilderness; added over 1,000 miles of Wild and Scenic Rivers, 2,800 miles of National Trails, and 330,000 acres of National Conservation Areas; codified the National Landscape Conservation System; and authorized the Forest Landscape Conservation Service and measures to improve our oceans, coasts, Great Lakes, and water resources. For detailed information on the natural resources accomplishments in the law click [here](#).

FAA Air Transportation Modernization and Safety Improvement Act

The *FAA Air Transportation Modernization and Safety Improvement Act*, passed in the Senate in March 2010, included a number of provisions that would help to promote clean energy deployment and reduce harmful emissions. For instance, the legislation requires the FAA to issue guidelines for the construction of wind farms in the proximity of critical FAA facilities, creates a program that would reduce emissions from airport power sources and increase energy efficiency, and authorizes funding for programs to develop alternative fuels, especially renewable fuels, that can be used in existing aircraft engines.

Closing the Black Liquor Alternative Fuel Loophole

In March 2010, the *Health Care and Education Reconciliation Act* closed a tax loophole that had allowed paper and pulp industries to claim an alternative fuel tax credit not intended for their industry. This loophole had allowed certain industries to mix a byproduct known as black liquor that is created during their normal operations with diesel fuel, which actually encouraged the use of fossil fuels rather than alternative fuels.

U.S. Capitol – Energy and Environmental Improvements

In May 2009, at the request of Senator **Reid** and Speaker Pelosi, the Architect of the Capitol (AOC) announced that, unless backup capacity is needed, the U.S. Capitol Power Plant would use natural gas, instead of coal, as the sole fuel source for steam used at the Capitol complex to heat buildings and water. For more information on this action click [here](#).

Additionally, the AOC, in part through the direction in the *Energy Independence and Security Act of 2007*, has embarked on a number of sustainability initiatives across the Capitol complex to reduce energy consumption, conserve natural resources, protect the environment and, in the long term, save taxpayer dollars. The AOC has installed more than 15,000 compact fluorescent bulbs, low-flow water fixtures, and daylight-harvesting systems that take advantage of sunlight levels, reducing the need for electric lights, and installed solar panels in a Senate parking lot to power new lights. For more on these actions click [here](#).

Fiscal Year 2010 Interior and Environmental Protection Agency Appropriations

The Fiscal Year 2010 appropriations bill for the Department of Interior and the Environmental Protection Agency included numerous provisions that are important to protecting the nation's natural resources and environment. For instance, the legislation allocated \$2.1 billion to the clean water state revolving fund to help communities improve their wastewater infrastructure critical to preventing sewer overflows that can cause significant water quality problems. The legislation also provided more than \$450 million (\$158 million more than the enacted Fiscal Year 2009 level) for the Land and Water Conservation Fund which allows federal land management agencies with the

financial resources to acquire lands for the national parks, wildlife refuges, forests, and monuments and to help protect other lands through conservation easements.

Fiscal Year 2010 Energy and Water Appropriations

The Fiscal Year 2010 appropriations bill for the Department of Energy continued the work by Democrats to encourage greater investments in clean energy research and development by providing \$2.24 billion for renewable energy and energy efficiency research and development. For too long a major deficiency of the nation's energy policy was that the government and the private sector's acceptance of stagnant investment in clean energy research and development while the nation's energy challenges were becoming more acute. For more information about the efforts of Senate Democrats to increase investments in clean energy research and development click [here](#).

110th Congress

Energy Independence and Security Act of 2007

The *Energy Independence and Security Act* increased Corporate Average Fuel Economy (CAFE) requirements for the first time in more than 30 years; raised the renewable fuel standard to 36 billion gallons by 2022 (specifying that 21 billion must be produced from advanced biofuels); established new energy efficiency and green building requirements for federal government buildings; and included strong new efficiency standards for lighting, and for residential and commercial appliances and equipment such as refrigerators, freezers, and light bulbs.

The EIA analyzed the impact of the *Energy Independence and Security Act* and found that the legislation is expected to contribute to a reduction in energy-related CO₂ emissions of over 500 million metric tons. For a frame of reference, this reduction is about the same amount as the current annual CO₂ emissions by South Korea, the world's ninth-largest source of CO₂ emissions. For more information on the EIA's analysis click [here](#).

Water Resources Development Act

Democrats enacted the *Water Resources Development Act* over former President Bush's veto in order to help protect New Orleans and Gulf Coast communities from flooding; restore coastal wetlands from hurricane damage; improve water quality and navigation across the country; and protect sensitive areas like the Florida Everglades and the Mississippi River.

Food, Conservation, and Energy Act

The *Food, Conservation, and Energy Act of 2008* became law on May 22, 2008, after President Bush's veto was over-ridden by the House and Senate. The new law annually

enrolls 13.2 million acres into the Conservation Stewardship Program, which provides all agricultural producers, including livestock and specialty crop producers, the opportunity to achieve high levels of conservation on their soil and in their water resources. The new law also protects valuable wetland areas by reauthorizing the Wetlands Reserve Program to enroll 250,000 acres per year through 2012. The protection and restoration of wetlands are important to the environment because wetlands simultaneously protect wildlife habitat, defend against catastrophic flooding, and improve water quality by filtering out pollutants like nitrogen.

Renewable and Energy Efficiency Tax Credits

The *Emergency Economic Stabilization Act* extended clean energy tax credits and approved new funding for Clean Renewable Energy Bonds used by communities to finance clean energy facilities. The legislation was especially important to the nation's solar industries because it extended a business and residential solar investment tax credit for eight years. For more information on the benefits that these solar tax credits are projected to promote click [here](#).

The Consolidated Natural Resources Act

The *Consolidated Natural Resources Act of 2008* created the Wild Sky Wilderness area in Washington State by designating approximately 106,000 acres of national forest lands in the Mount Baker-Snoqualmie National Forest. The legislation also contained many other provisions created new natural heritage areas, better water resources management, and improved national parks.

Passenger Rail Investment and Improvement Act

Democrats succeeded in giving travelers and commuters more environmentally friendly transportation options by authorizing \$13 billion over five years for Amtrak. The Department of Energy has found that Amtrak trains are nearly 20 percent more fuel-efficient than automobiles and commercial airliners. Also, per passenger-mile, trains emit half the amount of greenhouse gases into the atmosphere as jet airplanes.

Mercury Export Ban Act

The *Mercury Export Ban Act of 2008* prohibited the commercial export of elemental mercury from the United States in 2013. The legislation will also prohibit the commercial sale or transfer of federal mercury stockpiles held by the Department of Energy and the Department of Defense for any purpose except for transfer into permanent storage and also provided for permanent storage of collected mercury by the Department of Energy.

Great Lakes--St. Lawrence River Basin Water Resources Compact and the Great Lakes Legacy Reauthorization Act

The *Great Lakes--St. Lawrence River Basin Water Resources Compact* and the *Great Lakes Legacy Reauthorization Act* invests in important conservation and restoration efforts throughout the Great Lakes. The *Great Lakes Legacy Reauthorization Act* authorizes funding to clean up contaminated sediments and improve habitat restoration. The *Great Lakes--St. Lawrence River Basin Water Resources Compact* implements water conservation and management efforts that will help safeguard the Great Lakes for future generations. For more information on the implementation of the Great Lakes Legacy Reauthorization click [here](#).

Maritime Pollution Prevention Act

The *Maritime Pollution Prevention Act* requires the Coast Guard and the Environmental Protection Agency to issue air emission standards and requirements for ships. The legislation requires the federal government to establish maritime standards for nitrogen oxides, sulfur oxides, and other volatile organic compounds.

Clean Boating Act of 2008

The passage of the *Clean Boating Act* ensures that recreational boating vessels, under normal operation, will not be subjected to permitting requirements under the *Clean Water Act*. The law codifies a 1973 Environmental Protection Agency regulatory exemption, which had been eliminated by a U.S. District Court that granted recreational boaters a waiver from the national pollutant discharge elimination system permitting requirements.

National Aeronautics and Space Administration Authorization Act

The *National Aeronautics and Space Administration Authorization Act of 2008* required NASA to pursue a program of Earth observations, research, and applications activities to better understand the Earth system and climate change. The legislation reauthorized the Glory mission, an Earth-orbiting observatory that will help scientists fill a significant gap in their understanding of global warming. Specifically, the mission allows scientists to study the role of clouds and airborne particles, and monitor the influence of solar energy on the global climate with unparalleled accuracy. The legislation also required NASA to establish an aeronautics research, development, and demonstration initiative on environmentally friendly aircraft, including reductions in greenhouse gas emissions. Finally, the reauthorization mandated that NASA's Administrator take steps to ensure that the public has reliable and accurate access to the results of scientific research on global warming.

The America COMPETES Act

The *America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act of 2007* (America COMPETES Act) establishes

the Advanced Research Projects Authority-Energy (ARPA-E) within the Department of Energy to support research of high-risk technological barriers in the development of applied energy technologies, including carbon neutral technologies. For more information on the types of projects that are now receiving funding due to the authorization of ARPA-E click [here](#).

The *America COMPETES Act* also included a requirement that the Administrator of the National Oceanic and Atmospheric Administration, in consultation with the National Science Foundation and NASA, establish a coordinated program of ocean and atmospheric research and development to promote U.S. leadership in ocean and atmospheric science.

Reauthorizations of the Asian and African Elephant Conservation Funds, and of the Rhino and Tiger Conservation Fund

The reauthorizations of Conservation Funds for African Elephants, Asian Elephants, Rhinos, and Tigers through Fiscal Year 2012, which were signed into law on December 6, 2007, will support field conservation projects, including scientific research, habitat enhancement, law enforcement, monitoring and local community outreach, and education initiatives that benefit African and Asian elephants, rhinos, tigers and their habitats.

Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009

The *Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009* included \$7.51 billion for the Advanced Vehicle Manufacturing Loan Guarantee program. This funding financed approximately \$25 billion in loans for auto manufacturers to produce cleaner and more fuel-efficient vehicles. In June 2009, the Department of Energy committed \$8 billion in loan guarantees to certain auto manufacturers to help them produce the next generation of fuel-efficient cars and trucks and has made two additional loan guarantees in proceeding months. For detailed information on the implementation of this program click [here](#).

Consolidated Appropriations Act, 2008

The *Consolidated Appropriations Act of 2008* contained a number of important provisions central to addressing the issue of climate change. For example, the legislation contained a Sense of the Congress resolution which found that greenhouse gases: 1) accumulating in the atmosphere are causing average temperatures to rise at a rate outside the range of natural variability and 2) are posing substantial risks to the planet. The Sense of the Congress also stated that human activity is a substantial cause of greenhouse gas accumulation in the atmosphere and mandatory steps will be required to slow or stop the growth of greenhouse gas emissions into the atmosphere.

Additionally, the resolution stated that Congress should enact a comprehensive effective national program of mandatory, market-based limits and incentives on emissions of greenhouse gases that slow, stop, and reverse the growth of such emissions at a rate and in a manner that will not significantly harm the United States economy and will encourage comparable action by other nations that are major trading partners and key contributors to global emissions.

The legislation also provided \$3.5 million within the Federal Support Air Quality Management program for the EPA to use its existing authority under the *Clean Air Act* to develop and publish a rule requiring mandatory reporting of greenhouse gas emissions above appropriate thresholds in all sectors of the economy. For detailed information on the implementation of this program click [here](#).

The Fiscal Year 2007 Continuing Appropriations Resolution

The *Revised Continuing Appropriations Resolution*, which was signed into law on February 15, 2007, provided an increase of \$300 million over Fiscal Year 2006 levels for energy efficiency and renewable energy programs.